



# PATENT SPECIFICATION

DRAWINGS ATTACHED

994,533

*Date of Application and filing Complete Specification*  
April 29, 1963.

*No.* 16804/63.

*Application made in Norway (No. 144184) on April 28, 1962.*

*Complete Specification Published June 10, 1965.*

© Crown Copyright, 1965.

**Index at Acceptance:** B8, K(2G4:2K1).

**Int. Cl.:** B 65 d.

## Improvements in or relating to bags closable by means of a metal strip.

### COMPLETE SPECIFICATION

We, S. HAMMER A/S-PAPIRINDUSTRI, a Norwegian Body Corporate of 15, Hasleveien, Oslo, Norway, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

This invention relates to flat bags which have a closure flap which can be kept closed by means of a metal strip. The invention further relates to a method for the production of such bags.

The object of this invention is to produce a bag with such a closure arrangement which can be manufactured quickly and cheaply by simple means, and which at the same time ensures the efficient closing of the bag.

According to the invention there is provided a flat bag comprising two sides of unequal length, the longer side having parallel to the upper edge of the shorter side of the bag a fold line and forming a closure flap, which, when the bag is closed, rests against the outer surface of the shorter side, and a rectangular strip of metal foil of length equal to the width of the bag affixed to the longer side, the longitudinal centre line of the strip parallel to and the strip overlapping the fold line, which strip, when folded along the fold line ensures the closing of the bag.

The invention further provides a method of producing such bags, comprising the steps of folding a suitable length of web material to form two sides of unequal length, providing the material with a plurality of welded seams extending perpendicularly to the fold thus providing a continuous row of bags, placing a length of aluminium strip covered by weldable material on the longer side with the longitudinal centre line of the strip extending parallel to the upper edge of the shorter side and the strip overlapping a line which becomes, when the finished bags are closed, the fold line, welding the strip to the longer bag side by welding seams parallel to

the fold line and welding seams parallel and adjacent to the sides of each bag, and dividing the continuous row into separate bags.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings, in which:

Fig. 1 shows a bag with a closure arrangement according to the invention seen in open condition, and

Fig. 2 shows the bag in almost closed condition.

Figs. 3 and 4 show the opening of the bag from figs. 1 and 2 respectively on a greater scale and in cross section.

Fig. 5 shows schematically on a smaller scale how the production of bags can be effected according to the invention.

The bag according to the example shown is made from a web of plastics foil which is folded, whereby is obtained the bottom 8 as well as front side 1 and back side 2. The back side 2 extends somewhat past the upper edge 1' of the front side, so that a closure flap 2' is obtained. These are features known per se.

The production also takes place in a way known per se by providing the web (see fig. 5) with transverse welding seams 6, whereupon the individual bags are separated along the lines A—A.

According to the invention a rectangular strip 3 of metal foil is applied to the back side 2. The bag web is not only provided with transverse welding seams 6, but also with one or more longitudinal welding seams 7. Thereby the strip 3 is fastened to the back side of the bag as it clearly appears from figs. 1 and 3.

The strip 3 is preferably of aluminium foil lined on the one side with plastics-coated paper. Thereby the strip 3 is fastened to the bag by aid of the welding seam 7 as well as the parts 6' of the welding seam 6 which run across the ends of the strip.

(Price 4s. 6d.)

- Figs. 2 and 4 show how the strip 3 serves to close the bag. The closure flap 2 is then bent over the opening 5, the flap being bent along the dotted fold line 4. The metal strip 3 is thereby bent as clearly appears from fig. 4, and because of the inherent property of the metal, the strip will stay in its bent position and thereby keep the opening of the bag closed.
- 10 It will be understood that the arrangement and process according to the invention can also make use of other materials than those described here, in the strip as well as in the bag, the essential point being that the strip
- 15 is made of a "dead" material which keeps its shape by bending and can be fastened to the bag.

WHAT WE CLAIM IS:—

1. A flat bag comprising two sides of unequal length, the longer side having parallel to the upper edge of the shorter side of the bag a fold line and forming a closure flap, which, when the bag is closed, rests against the outer surface of the shorter side, and a
- 25 rectangular strip of metal foil of length equal to the width of the bag affixed to the longer side, the longitudinal centre line of the strip parallel to the fold line and the strip overlapping the fold line, which strip, when
- 30 folded along the fold line ensures the closing of the bag.
2. A flat bag as claimed in claim 1, wherein the strip of metal foil comprises aluminium foil covered by weldable material
- 35 which is welded to the bag.
3. A flat bag as claimed in claim 2, wherein the weldable material covering the aluminium foil is plastics coated paper.
4. A method of producing flat bags as
- 40 claimed in claim 2, comprising the steps of folding a suitable length of web material to form two sides of unequal length, providing the material with a plurality of welded seams extending perpendicularly to the fold thus

providing a continuous row of bags, placing a length of aluminium strip covered by weldable material on the longer side with the longitudinal centre line of the strip extending parallel to the upper edge of the shorter side and the strip overlapping a line which becomes, when the finished bags are closed, the fold line, welding the strip to the longer bag side by welding seams parallel to the fold line and welding seams parallel and adjacent to the sides of each bag, and dividing the continuous row into separate bags.

5. A method of producing flat bags substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

6. Flat bags when produced by the method as claimed in claim 5.

S. HAMMER A/S-PAPIRINDUSTRI.

Per:

BOULT, WADE & TENNANT,  
112, Hatton Garden, London, E.C.1.  
Chartered Patent Agents.

This drawing is a reproduction of  
the Original on a reduced scale.

